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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/721,790	11/22/00	SIMMERS C	042390.P3581

EXAMINER	
LEWIS,D	
ART UNIT	PAPER NUMBER
2673	4

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DATE MAILED: 10/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/721,790	Simmers
Examiner	**Art Unit**
David L Lewis	2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Nov 22, 2000

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-32 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-32 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

Title: Application Of Split And Dual Screen LCD Panel Designs In Cellular Phones

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. **Claims 1, 5, 7-9, 12-22, and 24-32 are rejected under 35 U.S.C. 102(a) as being anticipated by Nomura et al. (5881299).**

3. **As in claim 1, Nomura et al. teaches of** in an information device, **figures 1, 7, and 8**, having a CPU, **figure 1 item 10**, display controller and a display panel, **figure 1 items 14 and 18**, said display panel split logically into sub-panels, **figure 1 items Area1 and Area2**, an apparatus comprising: a plurality of segment drivers coupled between said display panel and said display controller, said segment drivers receiving input data from said controller, **figure 1 items 18**, said segment drivers translating said data into pixels displayable on said display panel, **figure 1 items Area2 and Area1**; and a power control block coupled to said CPU and to said segment drivers to disable a first power source which powers down a first set of said segment drivers, said powering down disabling a first

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set of sub-panels of said display panel from outputting pixels, said power control block disabling said first power source upon receiving a command from said CPU that said first set of sub-panels are to be powered down, said information device functioning as one of a cellular communications device and a personal digital assistant, said first set of sub-panels displaying information relevant to said personal digital assistant function, further wherein said display panel includes a second set of sub-panels displaying information relevant to said cellular communications function, **figures 1 items 20 and 22, column** 1 **lines 59-67, column 2 lines 1-6, column 4 lines 18-55, column 7 lines 29-36.**

4. **As in claim 5, Nomura et al. teaches of** in an information device, figure 8, having a CPU, figure 8 item 100, display controller, figure 8 item 101, and two display panels, figure 8 items Area1 and Area2, an apparatus comprising: a first set of segment drivers coupled to said display controller to receive as input a first set of data, said first set of segment drivers translating said first set of data into pixels output on a first of said display panels, **figure 8 items 105b and 105c**; a second set of segment drivers coupled to said display controller and said first set of segment drivers to receive a second set of data, said second set of segment drivers translating said second set of data into pixels output on a second of said display panels, **figure 8 items 105b and 105d**; and a power control block coupled to said CPU and to said first and second set of segment drivers to disable a first power source which powers down said second set of segment drivers, said powering down disabling said second display panel from outputting pixels, said information device functioning as one of a cellular

communications device and a personal digital assistant, said second display panel displaying information relative to said personal digital assistant function, further wherein said first display panel displaying information relevant to said cellular communications function, **figure 8 items 101 and 106**, wherein the controller 101 coupled to the CPU 100 inputs power from the power supply 106, and controls input power for drivers 105, turning on/off the power supply of the liquid crystal under the control of the CPU, **column 7 lines 10-15, column 8 lines 10-67**.

5. **As in claim 7, Nomura et al. teaches of** an information device having a single display panel logically split into a first and second sub-panel, **figure 3 items Area1 and Area2**, said device comprising: a top shell including a top inner shell and a top outer shell, said top outer shell on the opposing side of said top inner shell, said top inner shell containing said display panel, figure 3 items 30 (outer) and 31(inner); a joint coupled to said top shell for folding said device, **figure 3 item 30 display cover hinge connecting items 30 and 31, not fully illustrated but said joint inherent**; and a bottom shell coupled to said top shell through said joint, said bottom shell including a bottom inner shell and a bottom outer shell, said bottom outer shell on the opposing side of said bottom inner shell, said bottom shell having an open area, figure 3 items Area1 and Area2, wherein said open area leaves visible said first sub-panel and hides said second sub-panel when said device is closed about said joint, wherein when said device is closed, a first power signal is disabled to power down said second sub-panel and a second power signal is enabled to power said first sub-panel, said information device

functioning as one of a cellular communications device and a personal digital assistant, said second sub-panel displaying information relevant to said personal digital assistant function, and said first sub-panel displaying information relevant to said cellular communications function, **figure 3 items 18, 26, 30, and 31, column 5 lines 6-31**. As in **claims 8 and 9**, Nomura teaches of said open and functioning states, figure 3, column 5 lines 10-50, column 6 lines 14-31, and

6. **As in claim 12, Nomura teaches of** an apparatus comprising: a wireless communication module, **figure 1 item 28**; a computing module, **figure 1 item 10**; a display, wherein the display is adapted to display information related to the wireless communication module and the computing module, **figure 1 item 18**; and a display controller adapted to disable a first portion of the display and enable a second portion of the display, **figure 1 item 20**.

7. Further **as in claim 13**, Nomura teaches wherein the first **portion** of the display is adapted to display information related to the wireless communication module, figure 3, column 6 lines 14-60. **As in claim 14**, Nomura teaches wherein the second portion of the display is adapted to display information related to the computing module, figure 3, column 6 lines 14-60. **As in claim 15**, Nomura teaches wherein the first portion is adapted to display information related only to the wireless communication module, figure 3, column 6 lines 14-60. **As in claim 16**, Nomura teaches wherein the computing

module is adapted to operate as a personal digital assistant, figure 12. **As in claim 17**, Nomura teaches further comprising at least two segment drivers coupled to the display and the controller, figure 1. **As in claim 18**, Nomura teaches wherein the display controller is adapted to disable the first portion of the display while the second portion of the display is enabled, figure 3, column 6 lines 14-60.

8. **As in claim 19, Noruma teaches of** an apparatus comprising: a display controller adapted to disable a first portion of a display while enabling a second portion of a display, the first portion of the display adapted to display information from a wireless communication device and the second portion of the display adapted to display information from a personal digital assistant, **figure 1 item 20, column 5 lines 10-50**.

9. As in **claim 20**, Noruma teaches said display enable/disablement, column 4 lines 25-55, column 6 lines 14-60. As in **claim 21**, Noruma teaches at least two segment drivers, figure 1. As in **claim 22**, Noruma teaches first and second contiguous portions, figure 1 and 3.

10. **As in claim 24, Noruma teaches of** a method comprising: displaying information related to a wireless communication device on a first portion of a display, **column 3 lines 47-59, column 4 lines 40-55**; disabling the first portion of the display, **column 4 lines 17-55**; and displaying information

related to a personal digital assistant on a second portion of the display, **column 4 lines 17-55, column 5 lines 10-50**.

11. Further as in **claim 25**, Noruma teaches of disable/enablement simultaneously, column 4 lines 5-55, column 6 lines 40-45. As in **claim 26**, Noruma teaches of displaying wireless communication information, column 5 lines 49-67. As in **claim 27**, Noruma teaches of simultaneous wireless and digital information, column 5 lines 49-67.

12. **As in claim 28, Noruma teaches of** an article comprising: a storage medium having stored thereon instructions that when executed by a computing platform results in displaying information on a first portion of a display, wherein the information is related to a wireless communication module, **column 7 lines 1-10**; displaying information on a second portion of a display, wherein the information is related to an application program running on the computing platform, **column 7 lines 1-20**; and disabling the first portion of the display while displaying information on the second portion of the display, **column 7 lines 1-20, figure 3**.

13. Further as in **claim 29**, Noruma teaches of instructions disabling display, column 7 lines 1-20. As in **claim 30**, Noruma teaches of disabling a first and second segment driver, column 7 lines 1-30. As

in **claim 31**, Noruma teaches of disabling a second portion while displaying a first portion, column 7 lines 1-20. As in **claim 32**, Noruma teaches of simultaneously displaying on a first and second portion, column 7 lines 1-20.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. **Claims 2-4, 6, 10, 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. (5881299) in view of Britz (5414444) and Imai et al. (Des377341).**

16. **As in claims 10 and 23, Nomura et al. teaches of** an information device as applied above to claims 1, 5, and 7, **however Nomura et al. does not explicitly teach of** having two separate display panels, each display panel **on separate physical planes**. However this distinction would be an obvious design choice in view of Nomura's teaching of a first display and second display area which are independently driven, each area being structurally different, wherein a second area is formed of

160x239 pixels and the first area is formed by 1x8 pixels, said first area comprised of 8 physically larger pixels than the second area and not of a matrix type, said first and second displays controlled to conserve power. **Given the design structural differences and their independently driven construction, it would be and obvious design choice** provide said displays on separate physical planes, to accommodate their pixel structural differences. Imai et al. obviously teaches of a well known variation of the device as taught by Britz, wherein Britz teaches of a first display figure 1 item 101, figure 6 item 101 and a second display, figure 2 item 121, figure 6 item 121, such that it would have been obvious to power save by disabling the portions of the second display area not in use while operating the device in the communication mode, as taught by Britz, and obviously modified by Imai et al., wherein the top portion of the multimedia display as taught by Imai et al., would not need to function during said communication mode. Therefore Britz teaches the need for two displays operating on separate physical planes, wherein during a communication mode, a portion of the multimedia display 121 corresponding to the communication mode display 101 would not need to be in use, given that display 101 would be functioning, further wherein as modified by Imai et al., an additional portion of multimedia display, positioned above the corresponding communication display, or in other words, the top portion of the multimedia display, would not need to be functioning while in the communication mode, as taught by Noruma et al, as found in claims 10 and 23.

17. Further as in **claims 2**, Noruma teaches of **obviously** teaches of said second power source which powers down a second set of said segment driver, figure 1, column 3 lines 46-59, column 4 lines 5-46, and column 7 lines 29-36. As **claim 3**, Noruma obviously teaches of independent switching, column 7 lines 1-45. As in **claim 4**, Noruma obviously teaches of a normally open latch/switch, column 4 lines 35-47, column 5 lines 10-25, column 6 lines 1-45. As in **claim 6**, Noruma obviously teaches of said second power source which powers down said first set of segment drivers, figure 1, column 3 lines 46-59, column 4 lines 5-46, and column 7 lines 29-36. As in **claim 11**, Nomura teaches of powering said first and second display, column 7 lines 1-30.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Burgan et al. (5805121), column 4 lines 32-65, Okada et al. (4778260), Taniguchi (4824212).**

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(703) 306-3026**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938. Any

inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (7 0 3) 306-0377.

BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600